

REMARKS

This amendment is being filed in response to an Office Action mailed 12/04/2008, in which the Examiner said that claims 8-11, 14, 15, 39, 40, 51, and 52 were pending but rejected. In this amendment, claims 8 and 11 are amended to overcome reasons for rejection given by the Examiner, and other reasons for rejection are traversed below.

This amendment is being mailed with a request for a time extension of one month, and with a Request for Continued Examination.

Claims Rejected under 35 USC §§101, 112

The Examiner said that claims 8-11 were rejected under 35 USC §101 because these claims were directed to neither a process or a machine because they embrace or overlap these two statutory classes of invention. The Examiner additionally said that these claims were rejected under 35 USC §112, second paragraph, citing claim 8 as reciting “a microprocessor *accessing* said data storage as indicating that the claim should be considered a process claim, while other elements indicate that the claim should be considered a machine claim.

Regarding claim 8, in this amendment, this claim is modified to require that the meter must be *programmed to* access said data storage, instead of accessing said data storage. Support for this modification is found in page 22, lines 1-3, of the specification as originally filed. In this regard, it is noted that step 168 is part of the process occurring within the meter, shown in FIG. 7. Also, in claim 8, articles “an” and “the” are added to correct grammatical errors. It is respectfully submitted that claim 8, as modified herein, meets the requirements of 35 USC §§101, 112.

Regarding claims 9 and 10, it is respectfully submitted that these claims also meet the

requirements of 35 USC §§101, 112, due to the amendment herein of claim 8, upon which these claims depend.

Regarding claim 11, in this amendment, this claim is modified that the server has an interface for accessing said database instead of that it is accessing said database. Support for this modification is found in page 26, lines 7-12. In addition, this claim is modified to indicate that the server computer is programmed to receive data and to write the data. Support for this modification is found on page 27, lines 2-5. It is respectfully submitted that claim 8, as modified herein, meets the requirements of 35 USC §§101, 112.

Claims Rejected under 35 USC §103

The Examiner said that claims 8-11, 14, 15, 39, 40, 51, and 52 were rejected under 35 USC §103(a) as being unpatentable over U.S. Pat. No. 6,819,099 to Villicana et al., hereinafter *Villicana*, in view of U.S. Pat. Appl. No. 20002/0026575 A1 to Wheeler, hereinafter *Wheeler*,

Regarding claims 8, 14, 39, and 51 the Examiner said that these claims were rejected with *Villicana* being relied upon to show a system including a central computer and a database connected to a plurality of utility meters to obtain utility usage information, and with *Wheeler* being relied upon to show a message authentication method.

1. The Applicants respectfully submit that *Villicana* and *Wheeler* fail to teach or anticipate the requirements of claim 8 for said microprocessor in each meter in said plurality of meters to be additionally programmed to generate an ordered sequence of values for use as each said alphanumeric value, and to transmit, on a periodic basis, to said central computer system, a next value from said ordered sequence of values, in both an unencrypted form, and as combined with said value representing said measured usage of said utility product and encrypted with said private cryptographic

key.

The Examiner indicated that *Wheeler* taught these requirements in ¶¶0004, 0115, 0145, and 0172. It is noted that *Wheeler* merely indicates, “The digital signature of the message also preferably includes a unique random number or session key, such as, for example a date and time stamp...”

The Applicants note that, while a date or time stamp may form an ordered sequence of values, there is no indication in *Wheeler* that the meter should transmit the *next* from such a sequence. For example, if the time and date values are changed every second, the next value occurs every second. This difference is particularly significant, because, transmitting the next value in the sequence, as required by the Applicants’ invention, provides a way of knowing whether any intervening transmissions have occurred between two known transmissions. Such information cannot be obtained if only the time and date stamp information for each of the known transmissions is known.

Furthermore, the Applicants note that *Wheeler* only suggests the encryption of the date and time stamp as a part of the message. There is no indication in *Wheeler* that the date and time stamp should be sent in both an encrypted and an unencrypted form, as required by the Applicants’ claim 8.

2. The Applicants additionally respectfully submit *Villicana* and *Wheeler* fail to teach or anticipate the requirements of claims 8, 14, 39, and 51 for said processor within said central computer system is additionally programmed to receive said unencrypted form of said value in said ordered sequence of values as unencrypted version of said alphanumeric value, to determine whether said alphanumeric value received as said message follows, within said ordered sequence of values, a value previously transmitted as said alphanumeric value from said meter, and to store data derived from said value representing a measured usage of said utility product within said data record including said meter identifier identifying said meter in response to determining that said

decrypted message matches said unencrypted version of said message together with determining that said alphanumeric value follows said value previously transmitted as said alphanumeric value from said meter.

The Examiner said that *Wheeler* teaches these requirements in ¶¶0114-0116 and 0172. However, the Applicants note that, while *Wheeler* indicates that the digital signature of the message also preferably includes a random number or session key, such as, for example, a date and time stamp, so that no two digital signatures originated by the device (meter) would be identical, there is no mention in *Wheeler* that the random number should be sent in an unencrypted form as well as an encrypted form, as required by the Applicants' claims 8, 14, and 39. Instead, *Wheeler* only describes the random number as being part of the message, so that the random number is encrypted with the rest of the message. There is also no mention in *Wheeler* that a value of the random number is compared to a value previously transmitted as the alphanumeric value, so that a determination can be made of whether the value of the random number follows the previously transmitted value in the numeric sequence, as required by the claims 8, 14, and 39. Instead, *Wheeler* teaches that the new digital signature should be compared with all of the previous digital signatures to make sure that the new digital signature does not match any previous digital signature.

This difference is significant, in that the Applicants' method requires only one comparison, with the previous alphanumeric value to determine whether the new value follows the old in a sequence, while the method of *Wheeler* requires a comparison with each of the previous digital signatures. Since there would generally be twelve digital signatures per year, the method of *Wheeler* would be much more cumbersome, taking more time in this part of the verification process. Furthermore, the Applicants' method of determining the position in a sequence provides more information, and would apparently be more difficult to defeat. The method of *Wheeler* could be defeated by figuring a way to change a digital signature, while maintaining a digital signature that could be verified.

3. For all the reasons described above, the Applicants respectfully submit that claims 8, 14, 39, and 51 are patentable under 35 USC §103(a) over *Villicana* in view of *Wheeler*.

Regarding claims 9-11, 15, 40, and 52, since these dependent claims merely add limitations to the independent claims 8, 14, 39, and 51, the Applicants respectfully submit that these dependent claims are additionally patentable under 35 USC §103(a) over *Villicana* in view of *Wheeler* for reasons described in detail above regarding the independent claims.

Conclusions

The Applicants respectfully submit that the Application, including claims 8-11, 14, 15, 39, 40, 51, and 52, is now in condition for allowance, and that action is respectfully requested, along with reconsideration and reversal of all objections and reasons for rejections.

Respectfully submitted,



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